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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/889,587	11/20/2001	Katsuhiro Ando	010930	3002

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EXAMINER

ROBERTSON, JEFFREY

ART UNIT

PAPER NUMBER

1712

DATE MAILED: 06/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicant(s)

09/889,587

Applicant(s)

ANDO ET AL.

Examiner

Jeffrey B. Robertson

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— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Homma et al. (U.S. Patent No. 4,981,728).

For claim 1, in Preparation Example 2, column 11, line 48 through column 12, line 1, Homma teaches the preparation of a propylene oxide polymer that contains reactive silicon groups at the chain ends. Homma teaches that by NMR, at the chain ends, the polypropylene oxide has 1.8 silicon groups in a molecule. Since the maximum amount of silicon groups at the chain end per molecule is 2.0, the amount of the silicon groups is $1.8/2.0 = 90\%$ per molecule. For claim 2, Homma teaches that the terminal groups of the polypropylene oxide are allyl ether groups or $(CH_2=CHCH_2O-)$ groups. This falls within applicant's general formula (1) wherein $R^1=H$ and $R^2=-CH_2-$. Homma teaches that the silane used is methyldimethoxysilane, which falls within applicant's general formula (3) wherein $m=0$, $a=2$, $X=$ methoxy, and $R^4=$ methyl. Here, Homma also teaches the use of a platinum or Group VIII transition metal catalyst. In column 4, lines 32-60, Homma teaches the addition of an epoxy resin to the composition.

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For claim 4, in column 5, lines 60-65, Homma teaches the addition of a compound that has groups reactive with epoxy and silicon groups.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Homma et al. (U.S. Patent No. 4,981,728) as applied to claims 1 and 2 above, and further in view of Watabe et al. (U.S. Patent No. 5,811,566).

For claims 1 and 2, Homma teaches the limitations of these claims as detailed above. Homma fails to teach that the chain terminus of the polyoxyalkylene polymer is derived from 3-chloro-2-methylpropene or methallyl chloride.

Watabe teaches in column 1, lines 49-53, that it is a well known method that a hydroxyl group containing polyether is reacted with alkenyl chlorides such as allyl chloride or methallyl chloride to introduce a terminal alkenyl group. These groups are treated as equivalents by Watabe.

Homma and Watabe are analogous art in that they both relate to the synthesis and use of polyethers capped with unsaturated groups and subsequent modification by a silicon group.

It would have been obvious to one of ordinary skill in the art at the time of the invention to substitute the allyl chloride used in the preparation of the alkenyl terminated polypropylene oxide of Homma with methallyl chloride. This would result in the chain terminus set forth by applicant in the formula in claim 3 after reaction with methyldimethoxysilane. It is prima facie obvious to substitute equivalents, motivated by a reasonable expectation that the respective species will behave in a comparable manner or give comparable results in comparable circumstances. *In re Ruff* 118 USPQ 343, *In re Jezei* 158 USPQ 99; the express suggestion to substitute one equivalent for another need not be present to render the substitution obvious. *In re Font*, 213 USPQ 532.

Response to Arguments

5. Applicant's arguments filed 4/21/03 have been fully considered but they are not persuasive. On page 9 of the response, applicant argues that there is no teaching, suggestion or motivation in the reference for an introduction rate of 90% or higher in the Homma et al. (U.S. Patent No. 4,981,728) reference. The examiner disagrees with this assessment of Homma. As set forth above, in Preparation Example 2, Homma sets forth an example where the introduction ratio is 90%. Therefore, the rejection of claims 1, 2, and 4 as being anticipated by Homma is continued. Likewise, the rejection of claim 3 over Homma in view of Watabe is also continued. The amendments to the claims are sufficient to overcome the rejections over the Hirose et al. (U.S. Patent No. 4,952,643) and Isayama et al. (U.S. Patent No. 4,657,986) references as well as the objections to the specification and claims. The rejections made under 35 U.S.C. § 112

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have also been overcome. Because the examiner had not discussed Preparation Example 2 of the Homma reference in the previous office action, the paragraph below explains that the rejection is made final because of applicant's amendment to the claims, which necessitated the reference to Preparation Example 2 in Homma in the above rejection.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

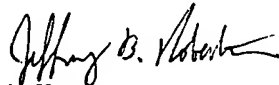
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey B. Robertson whose telephone number is (703) 306-5929. The examiner can normally be reached on Mon-Fri 7:00-3:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert A. Dawson can be reached on (703) 308-2340. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.


Jeffrey B. Robertson
Primary Examiner
Art Unit 1712

JBR
June 9, 2003